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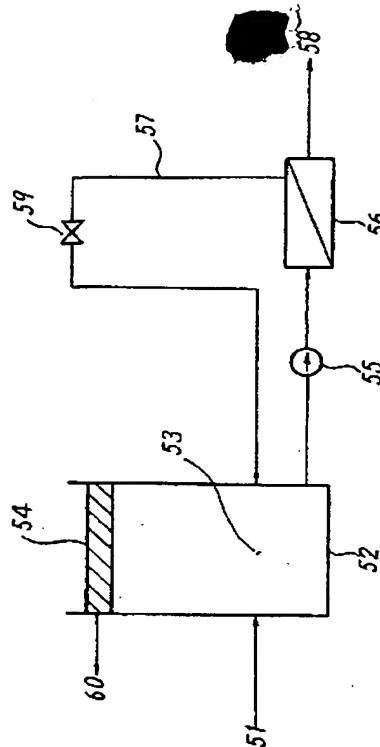
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TITLE : RECOVERY OF BUTANOL FROM
BUTANOL-CONTAINING WASTE
WATER



ABSTRACT : PURPOSE: To contrive energy saving and compaction of an apparatus, by removing water from a butanol-water based mixture by a reverse osmosis method and separating two layers by density difference between the water and butanol in recovering the butanol from butanol-containing waste water.

CONSTITUTION: Water is removed from a butanol-water based mixture 53 as a permeated water 58 using a cellulose acetate membrane, etc., by a reverse osmosis method using a reverse osmosis module 56 to concentrate the butanol to above a solubility (7.8wt% at 20°C) in water and separate the water and butanol into two layers by the density difference thereof (specific gravity of the butanol is 0.81 at 20°C). Thereby the pure butanol 60 is advantageously recovered from the butanol-containing waste water. According to this method, running cost and initial cost can be reduced to 1/2 of those in a conventional method (distillation method). Furthermore, continuous operation can be performed if the mixture 53 in an amount equal to that of the permeated water 58 and recovered butanol 60 as raw water 51 is fed to a circulation tank 52.

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